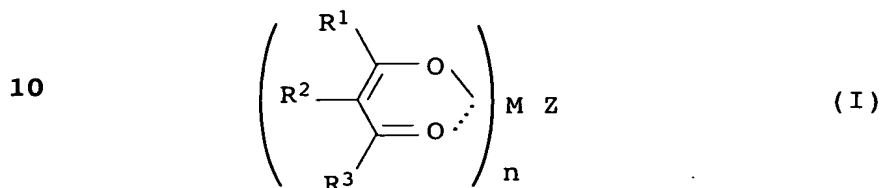


We claim:-

- 5 1. A process for preparing polyoxymethylene by contacting a formaldehyde source with a catalyst of the formula I



15 where

M is TiO, ZrO, HfO, VO, CrO₂, MoO₂, WO₂, MnO₂, ReO₂, Fe, Ru, Co, Rh, Ir, Ni, Pd, Pt, Cu, Zn, Cd, Hg, Sn, SnO or PbO;

20 R¹, R² and R³ are each independently a radical which is selected from H, alkyl, aryl and aralkyl, and the radical may be partly or fully halogenated;

Z is an anion; and

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n is 1 or 2.

2. A process as claimed in claim 1 where

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M is MoO₂ or WO₂.

3. A process as claimed in any of the preceding claims where

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R¹, R² and R³ are each independently H, C₁-C₆-alkyl which may be partly or fully halogenated, phenyl, benzyl or naphthyl.

4. A process as claimed in claim 3 where R¹ and R³ are each independently methyl, tert-butyl, trifluoromethyl, pentafluoroethyl, heptafluoropropyl, phenyl or naphthyl.

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5. A process as claimed in claim 4 where R² is H or methyl.

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6. A process as claimed in any of the preceding claims where

5 Z is a halide, sulfonate of the formula OSO_2R , where R is
 alkyl, partly or fully halogenated alkyl or aryl,
 complexed borate, complexed phosphate, complexed arsenate
 or complexed antimonate.

7. A process as claimed in claim 6 where

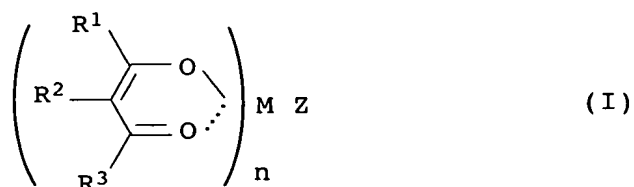
10 Z is OSO_2CF_3 or chloride.

8. A process as claimed in any of the preceding claims where the
 formaldehyde source is formaldehyde, trioxane or
 paraformaldehyde.

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9. A catalyst of the formula I,

20



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where

M is TiO , ZrO , HfO , VO , CrO_2 , MoO_2 , WO_2 , MnO_2 , ReO_2 , Fe , Ru ,
 Co , Rh , Ir , Ni , Pd , Pt , Cu , Zn , Cd , Hg , Sn , SnO or PbO ;

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R^1 , R^2 and R^3 are independently a radical which is selected
 from H, alkyl, aryl and aralkyl and the radical may be
 partly or fully halogenated;

Z is an anion; and

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n is 1 or 2.

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